

# AMATEUR RADIO



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by the W.I.A. (Vic. Div.), Official Organ  
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(N.S.W.) and the R.A.A.F. Wireless Reserve.



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SEPTEMBER, 1934

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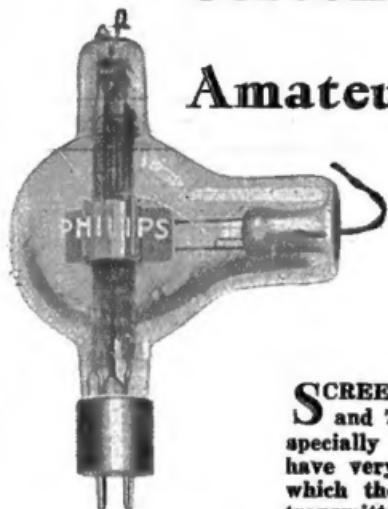
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For

## Amateur Transmitters



Types:

QB 2/75, QC 05/15

1/2 of actual size.

**S**CREEN GRID Transmitting Valves for 15 and 75 watts have been designed by Philips specially for use by amateurs. These valves have very important properties, as a result of which the construction and adjustment of the transmitter can be greatly simplified. The control-grid and anode of these valves are screened from each other by a screen-grid, thus reducing

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Table A shows the various electrical properties of the Philips amateur transmitting valves:-

### CHARACTERISTICS:

Table A.

Type.	Screen Grid Valves.	Valves.
Filament voltage	4.0	10.0
Filament current*	1	3.25
Saturation current*	400	2,000
Anode voltage	400-500	2,000
Screen grid voltage	75-125	300-500
Max. anode dissipation	15	75
Anode dissipation on test	20	100
Max. screen grid dissipation	3	15
Amplification factor*	225	200
Mutual conductance (slope)*	1.4	1.4
Int. resistance*	160,000	150,000
Anode-grid capacity	.001	.02
Max. diam of bulb	50	100
Max. length	160	210

\*Approximate values.

# PHILIPS

## TRANSMITTING VALVES

# Editorial

## W.I.A Facilities

As the Victorian division has opened their new rooms amid great rejoicing on account of increased space and general convenience, we feel justified in outlining some of the facilities extended to members.

One may frequently wonder just what value the W.I.A. is to hams generally, and we may with satisfaction point to our library of instruments and books, our power for unified effort in all directions affecting the amateur, including a degree of self-government otherwise impossible, our ability to run a magazine, organise contests and conventions, including dinners etc., secure handsome prizes, and control the dissemination of knowledge to future "hams" through our A.O.P.C. classes. Added to these may be coupled the work of the R.A.F.W.R., the phone band allocation committee, the QSL bureau, the good fellowship to be found at all section meetings, and last and by no means least is the direction and maintenance of a recently inaugurated policy of experimentation of the ultra-high frequencies. Also, by the way, the A.R.R.L. will not issue a W.A.C. to any person unless he is a member of the W.I.A. or affiliated body.

Furthermore, the Radio Inspector's Department will not consider any applications for power permits unless such applications are endorsed by the Wireless Institute of Australia.

## Contest

All the section notes this month indicate the satisfactory interest being shown by members of the W.I.A. and A.R.A. in the coming Centenary contest.

The effect of such a contest upon "ham" radio, apart from the establishing of better feelings among the gang from an international point of view, is the improvement being obtained through attention and experimentation with aerials and equipment suitable for such a contest.

Our magazine contains a further series of articles this month, which will be of some help as suggestions to an improvement of our chances of success.

The prizes which have been so generously donated are more than worthy of the attention of all "hams" worthy of the name throughout Australia.

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## Members' Subscriptions

As subscriptions for the year 1934-5 are now due, members will do well to renew their contributions to the funds as soon as possible.

As a concession to old members of the Victorian division for the time being unfinancial, it has been decided to continue the issue of AR until the September issue.

As we have a new year before us it is a most opportune time to enrol new members.

Is there some "ham" new or old within visiting distance whom you could call on and add to our growing list of members?

# Checking the Performance of the P.A.

Unfortunately, there are one or two measurements in R.F. work that the ham is not in a position to actually make by calculation or direct measurement owing to lack of data and instruments. Then again, he has to put up with a lot of "cut and try" methods because some things don't work out in practice as they do in theory. After all, that is what a ham is always doing, and that is where his fun comes in—by repeatedly experimenting with some gadget.

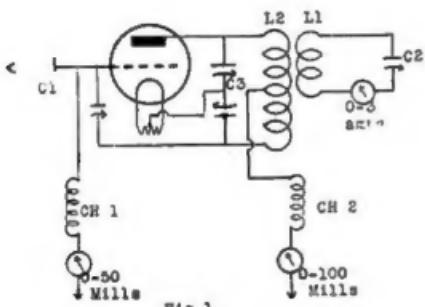


Fig. 1.

One of the determinations referred to above is the measurement of the excitation given to any power amplifier from its preceding stage. We have several figures given us. Some say that the power input to a driving stage should be one third of that put into the P.A. These figures seem to wander according to various authors, and we could do well to try out a test for ourselves.

Everybody realises that excitation controls the output of a tube, and naturally a tube could be one of three things: (a) under excited, (b) fully excited, or (c) over excited. We are, of course, aiming at (b) for highest efficiency. The following method is perhaps not the most accurate, but will be sufficient to show up which class a P.A. comes under.

The tube chosen for this test is a Philips TC1/75 and is being driven by a TBO4/10, as a buffer stage.

Throughout the determination we are not concerned with any other stage than the P.A., and once they are tuned to their maximum, output can be neglected. The instruments needed now are (i.) an R.F. ammeter of 0-3 or higher, and (ii.) a 0-50 milliamperemeter D.C. meter. Figure 1 shows the connections of a modern power amplifier properly neutralised. The components are standard with the exception perhaps of the excitation feed condenser C1, which could be a 23 plate midget. A variable condenser is necessary here because we desire to vary the feed during the test. The output circuit consists of a coil L1, condenser C2 and the R.F. Meter 0-3 amps. The 0-50 milliamperemeter is inserted in the ground bias lead after the choke CH1. The plate meter occupies the usual position after choke CH2. The constants for the tank circuit L2, C3 and the output circuit depend on the frequency chosen for the test. However, let L1 and C2 be a combination that will tune to the frequency desired.

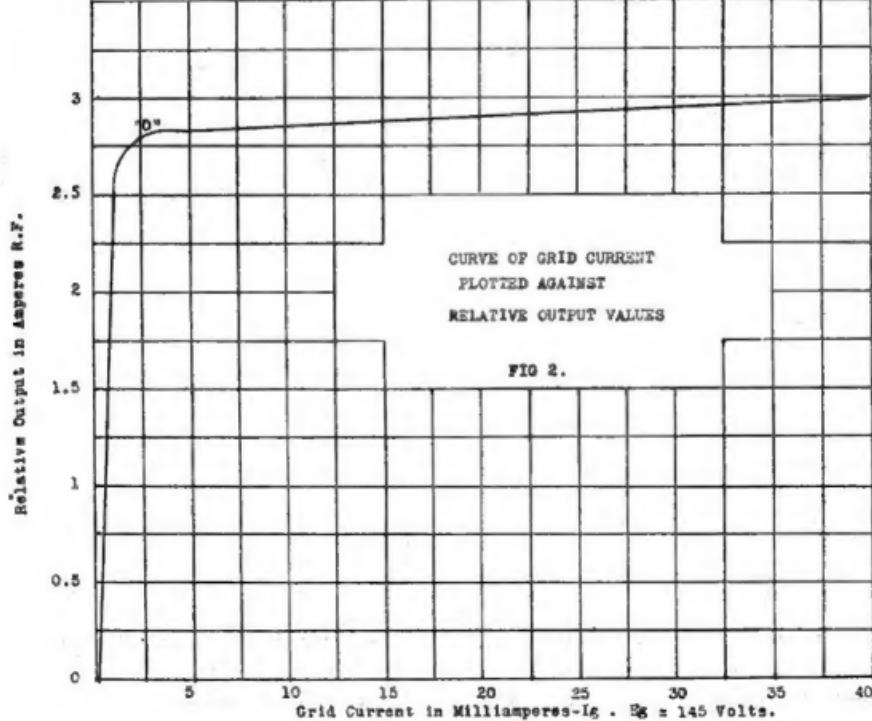
With the aerial disconnected, the P.A. is tuned to resonance by C3. The output circuit is now loosely coupled to L2 and is tuned by C2 to resonance with the tank frequency. Care should be taken in doing this because too tight a coupling will surely burn out the 0-3 amp. thermometer. The coupling should be varied in position until full scale deflection is arrived at, i.e., the needle is over 3 amps. Assuming now that we have a constant drive, and plate voltage, we can go ahead and carry out the test. The two latter values, by the way, were 150 volts bias and 1200 volts H.T. in my case, with the P.A. operated as a "C" class amplifier. Leave the power on and proceed as follows:—

Having a pencil and paper handy, record the readings of the R.F. meter, the grid meter, and, as a matter of interest, the plate meter. Now decrease the excitation by opening out C1 until the grid current has dropped

10 mills. Again read the meters and note. Repeat this operation in 10 milliamperc steps until the grid meter reads about 10 mills and then proceed in 2 mill steps, all the time noting the readings of the meters. When the grid meter and R.F. meter are at zero, repeat the operation, this time increasing the excitation until the R.F. meter is again at 3 amps. If the results compare favourably with those obtained the first time, then switch off the power and commence plotting the meter readings. For this you only need either a piece of graph paper, or, if none is handy, a piece of writing paper ruled off into half inch squares. Mark the grid current readings off along the bottom, as in Fig 2, and R.F. meter values along the vertical axis. Commence plotting the readings recorded and when finished, draw a line and connect all the points. A curve like that shown in the graph should result. For those unfamiliar with the plotting of graphs, it is done in this way. Take the grid current reading when the R.F. meter showed full scale deflection and locate it along

the bottom axis. Then run the finger up that line until you come to the R.F. meter value recorded, corresponding to that value on the vertical axis brought across with a finger of the other hand to where the two fingers meet. At this point mark in pencil with an "x". Continue thus until all readings have been plotted. Then connect them up with a pencil line.

We are now in a position to see what this graph means to us. Figure 2 shows that an increase of grid current from 2.5 mills to 40 mills has increased the relative output readings from about 2.755 amps. to 2.85 amps., showing that a large amount of power is being expended in exciting the P.A. for a very small percentage of increase after the full-excitation period has been reached. On the other hand, from zero grid current to about 2.5 mills we have the output increased from 0- to 2.755 amps., a terrific increase for such a small variation of grid current! An inspection of the curve tells us that the tube is under-excited until the top of the curve is reached and from there on,



where it begins to flatten out, power is being wasted and the tube is being over excited. The point that one should work at is that point just at the top of the curve just before it begins to flatten out; shown at "o" in Fig. 2.

Should you be unable to make this curve tail off, as in this example, but find that it still continues on straight up, then you will want more ex-

citation still. All fully excited P.A.'s should give a curve like this one, and if yours is doing this then you are getting pretty high efficiency.

It is likewise interesting to plot the plate current readings against the R.F., and also the grid current readings. They tell a similar tale and provide an interesting half hour's entertainment, perhaps, if only for enlightenment!

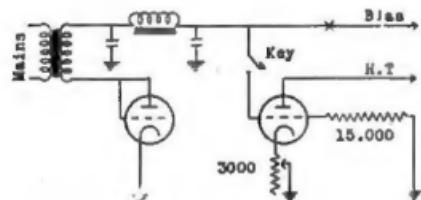
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## Efficient Keying

By VK3AH.

For the elimination of chirps and the protection of filter condensers, a bleeder resistance is very nice, but when the hopeful op sits on the key and sends the juice up into the transmitter, the bleeder unfortunately keeps right on doing its stuff and succeeds admirably in making away with a few watts which might as well be going into the 199, 852 or what have you.

The arrangement to be described was rigged up in order to put the HT mills where they belong when the key is pressed, and in addition acts as a bias eliminator incorporating blocked-grid keying.



The rectifier for the bias eliminator may be any valve with a few mills emission left and its filament may be supplied from the same source as the valves in the transmitter as the filament is at earth potential. For the mains transformer, an old audio-frequency transformer of approximately 1 to 1 ratio is o.k., while the filter choke may be the primary of another A.F.T. The bleeder for the bias eliminator must be capable of carrying, not only the few mills from the

bias supply, but also the grid current of the PA and FD, and may be a 15,000 ohm voltage divider. Any handy filter condensers are suitable.

With such a bias eliminator it was found simple to cut out the ordinary bleeder across the HT and make a spare valve do the job more efficiently by having it bleed only when the key is up.

A glance at the circuit diagram will show how this valve is made to function. The plate is connected directly to the positive side of the HT supply, while the filament (which must be lit from a separate source) goes through a variable, wire wound resistor of approximately 3000 ohms to earth. This latter resistor is used to limit the bleeder current going through the valve to any desired amount.

In operation, with the key down, the bleeder valve is sent to cut off, while the PA grid current flows down through the bias bleeder. When the key is up, the bleeder valve starts bleeding, while the grid of the PA is not only given a high negative charge, but is virtually isolated from earth.

The usual condenser and resistor combination is used across the key to cushion out any slight clix that may be present.

If the bias supplied by the eliminator is not enough for the PA or FD, insert a suitable resistor or a battery at point x in the bias lead, while if it is too much, decrease the value of the bias bleeder resistor. Tapping this resistor doesn't work.

# Effective Radiation

By VK4US.

The antenna is the most important part in a transmitting station, and particular care should always be taken in its construction, if good results are desired. The usual antenna seen at 90 per cent. of the modern ham stations is the common "Zepp." The new ham erects a "Zepp" because everyone uses it—it is easy to erect and tune, and because he is too lazy to figure out its advantages or disadvantages.

He erects his "Zepp," and then with different inputs tries to work DX. If with, say, 30 watts input he can't raise DX, he blames his locality and promptly raises his power, never taking the antenna into consideration, which, once it is erected, generally remains a fixture. There are many important phases, such as impedance matching and radiation angle, etc., to be taken into consideration when erecting an antenna. Location, height of poles, etc., are also of importance.

Let us take impedance matching, which is an angle of antenna construction very rarely looked upon by most hams.

The usual impedance of the half-wave Hertz flat-top, used by most hams, is about 75 ohms. This, of course, varies with locality and proximity of buildings, trees, iron roofs, etc., but it is near enough to take it for granted. Now we have our 75 ohm flat-top, the next stage is to get some type of feed system which not only suits our locality, but also our tuning system and transmitter, and, most important of all, to match the impedance of the flat-top.

Quite a few of the hams using the "Zepp" antenna—and with an input of 25 watts—have, no doubt, often wondered why they don't get out better. The reason is simple. They are not matching the impedance of their feed system to that of the flat-top. Therefore, radiation losses occur.

The impedance of the standard "Zepp" feed, 4-inch spaced, and using 14 gauge feed wires, is approximately 450 ohms, so you can see what a hopeless job it is of ever matching that impedance to 75 ohms, no matter how they tune. The obvious remedy for this is to cut down the space between the feeders. This can be done down to spacers of about  $1\frac{1}{2}$ -inches, when the impedance is about 210 ohms; but to cut them down any further introduces bad capacity effects, harmful to the efficiency and to the radiation percentage, and also causes bad harmonics. Thus, with the usual "Zepp" feed, a loss of at least 50 per cent. of the antenna input is incurred, and only 50 per cent. of the input is radiated from the flat-top. Of course, there will be less if radiation resistance, etc., are taken into consideration.

Next there is physical or effective radiation to be taken into consideration. If the radiation is only physical—that is, if the flat-top is not high enough above such objects as trees and roofs to prevent their having any effect on the radiation by their absorption, one will need a very efficient matching system before one can have any definite radiation angles or directional properties whatsoever. It will now be seen that under these conditions a "Zepp" or Marconi will not perform well at all, and that "brute force" (high power) will be needed before DX can be worked with any degree of efficiency.

If the antenna system is efficient, it will be surprising how easily DX can be worked on a QRP. For its radiation to be effective, the flat-top (if horizontal) should be at least 50 feet above objects which are likely to bring about absorption. In this case, a "Zepp" will perform quite efficiently, provided a bit of power is used, as it will have very definite directional properties and radiation angle, and, if it is horizontal, it will be directional at right angles to the flat-top. Thus, if the antenna was running north and south, its greatest

radiation would be east and west, and also straight up towards the sky and down to earth. This holds good for all horizontal flat-tops whose radiation is effective. Therefore, for an antenna system whose radiation is only physical, the radiation will occur mainly straight up and down, and to get any results at all an efficient system is necessary.

The directional effects of an effective horizontal radiator can also be altered by varying its radiation angle. Suppose our flat-top again runs north-south, now the greatest radiation (as stated above) is east-west, but in order to get good reports from the north the angle of radiation has to be altered, and it will be found that by lowering the north end of the antenna the radiation angle becomes lower and the direction is changed towards the north. Conversely, when the high end is in the north, it radiates towards the south. Thus the ham who is limited by the size of his land to the use of one antenna can make it a fairly good omni-directional type.

Now, if the antenna was one which had an effective radiation, very little success would be achieved, as an omni-directional antenna, a vertical one, would be the more efficient, and, if the high poles necessary are available, it is well worth the trouble and expense incurred in erecting one. It is the only type of radiator that can be classed as omni-directional. As the radiation is at right angles, it will radiate in all directions, and there will be practically no losses skywards, etc., and as all radiation is at a low angle to the earth's surface, greater distances can be traversed, and skip distance effects will not be so apparent as with a high angle radiator.

Having discussed impedance matching, angle of radiation and directional effects, it will be seen that one antenna in most cases has to serve all purposes. For the ham whose power is limited, we suggest a vertical or else a very high horizontal antenna for efficient DX working, and if he has no facilities for the erection of such an antenna he should match his impedances well, so that he can get the last ounce of power into his flat-top without having any wasted in radiation or absorption.

Special antennae are necessary for impedance matching, the first

being the using of impedance matching transformers, but these cause a bad sag in the centre of the antenna, owing to their weight. Then there is the single or double wire feed-tapped "Hertz" antenna. The advantages of these antennae are obvious, but the disadvantages are, of course, as in all systems, prevalent. The main disadvantages of most impedance matching systems concern those using self-excited or M.O.P.A. transmitters, as these radiators only resonate effectively on the frequency they are cut for. Another of their disadvantages is that the transmission lines should not be bent back under the flat-top, nor should the feeders have any sharp bends.

For the ham who has the facilities for antennae such as these, he would be well rewarded for his trouble, as the impedance of the feed lines are in perfect match with the flat-top. This means that there will be no standing waves on the feeders and the only radiation will be through the medium of the flat-top itself. The length of the transmission lines can be any convenient to the user, and they are untuned.

The necessity for a simple impedance radiating system which does away with most of the attendant disadvantages will now be seen. The "doublet antenna," using twisted flex feeders, is the very thing. The feeders can be any convenient length, and the impedance will be approximately 118 ohms for the standard lighting flex, which, as you can see, constitutes a fairly good match to the 75 ohm doublet flat-top. About 45 per cent. more power will be radiated from the flat-top than if 2-inch spaced "Zepp" feeders were used, which as can be seen, means a big increase in signal strength at the receiving end. Another great advantage to those whose shacks are only in a position to use the standard voltage fed systems is that the flex feed can be bent back under the antenna, or twisted around corners, without introducing any ill effects, and the radiation will be practically nil.

Any one of these impedance matching radiators will result in a great increase in output if used in the place of the obsolete Marconi or "Zepp," even if the radiation of the antenna

is only physical. The ideal system is obviously either a high horizontal matched impedance radiator having facilities for a variable radiation angle, or the one and only really efficient all round antenna—that is, a matched impedance vertical antenna.

All the modern commercial short-wave stations are installing vertical antennae on account of their properties of low angle radiation and their being the only simple, omnidirectional radiating system. As the power input of the majority of Australian hams is 25 watts, it is all important that, in order to get greatest radiation from their an-

tennae, efficient radiators must be installed. It is impossible under any circumstances to get any more than 47 per cent. of the input on to the flat-top of a system using "Zepp" or Marconi types, owing to the bad impedance match, but with a well constructed "doublet" system, at least 85 per cent. of the input goes to the flat-top, and the amount and direction of the radiation depends on the effective height, or whether a vertical antenna is used.

Most hams who have any foresight at all will see the strength of these arguments, and it is to be hoped that any newcomers will not erect the antiquated "Zepp" because VK? gets good DX results with it.

## DX in October

By Maxwell Howden, VK3BQ.

This month is by no means regarded as the best DX month, but since the majority of the Centenary events are being staged at about that time it was considered advisable by the Contest Committee to hold it at that time. In past years the forty metre band has been quite good, but as a rule, the twenty metre band, which we must consider more especially from the QRP man's point of view, has been very dead. There is always the chance, however, that the Englishmen and Europeans will thoroughly test this band, and should they do so it is reasonable to suppose that the twenty metre signals from them will reach us between 11 p.m. and 1 a.m., as they do slightly later in the year. One must also remember that at usual times the stations in other parts of the world do not get on the air to any extent at times when their signals are likely to reach us, and though there is no record of the South Africans coming across on twenty metres during our afternoons they should do so as well as they do during the B.E.R.U. contest.

Looking up the logs of the last couple of years shows that the majority of the DX for October has been worked on the forty metre band in the early hours of the morning,

though, of course, the W's can be worked with the usual ease right from the early afternoon onwards. The 1932 log shows contacts with FM8IH, F8RJ, HB9Q, F8YD, EAR185, EAR250 and W2BOD between the hours of 6 and 7 a.m. on the two mornings I was on the air. Conditions in the same month in 1933 showed a great improvement, and at the same times the stations 11IP, I2UE, EAR226, CT1BG, CT1AA, EAR185, EAR224, AC2MJ, ZS2A, CT1IH, G5VM, PAOWR, FM8CR, F8AF, F8PK, G5FV, G2BY, G2GA, G2ZQ and many others were heard and worked. It was during this month also that VK3KR worked FM8CR and earned his long coveted WAC. At the present time quite a number of Europeans are coming in in the afternoons on forty, and they should still come through fairly well in five weeks' time.

## IMPORTANT

Financial country members of the W.I.A. must make application for renewal of phone allocations before September 14th.

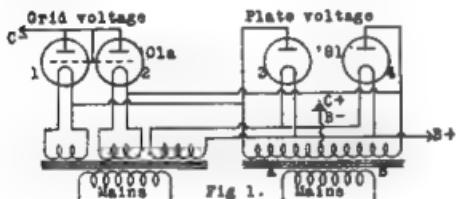
Members are reminded that this issue is the last to be forwarded to unfinancial members.

# Two Economical Power Supplies

By VK3ML, Technical Editor.

Those who make a habit of thoroughly examining all interesting articles in QST could not have failed to notice, in the April, 1930 issue, under "NKF Experiments above 28 Megacycles," a practical and economical method of obtaining C bias voltage from the crystal oscillator H.T. transformer. This method has been in use at 3ML for three years or more with great success.

The article quotes UX866's as the rectifying valves, but with only an alteration to the filament voltage the circuit is adaptable to type '81s. Fig. 1 shows the systematic wiring of the supply which gives both plate and grid voltage. Type 'Ola's have been used with success as the grid voltage rectifying valves, but any half wave valve may be used, of course. The usual filters are required, but are not shown in the diagram for simplicity's sake. Plate and grid voltages up to 500 volts may be obtained by this method.



It will be observed that the high voltage transformer serves to supply both B and C voltages, and the operation, as explained in QST, is as follows:—"On one half of each cycle, when the end 'A' of the transformer is positive, the tube '3' passes plate power and tube '2' passes grid voltage. On the other half of the cycle, when 'A' becomes negative and 'B' goes positive, tube '4' passes plate power and tube '1' passes grid voltage for the transmitting tubes. Each rectifier operates full wave, with two tubes connected to the same end of the transformer winding, working on opposite half cycles. Two separate filament windings, well insulated from each other, are necessary for this type of grid bias supply, since the two

filaments are connected to the opposite ends of the high voltage winding, and are always at high potential difference with respect to each other as well as to ground."

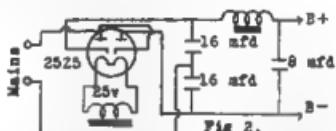


Fig. 2 depicts another satisfactory and proven idea for obtaining C.O. H.T. power from the A.C. mains without the aid of an H.T. transformer. Working as a full-wave voltage-doubler, the tube used, a 25Z5, delivers ample voltage for any C.O. This tube was primarily designed for obtaining D.C. voltage from the A.C. mains in "universal" receivers, without the aid of any transformers. As the characteristics are:

Heater voltage—25 volts

Heater current—0.3 ampere

A.C. voltage per plate (RMS)—  
125max volts

D.C. output current—100max mills, it is obvious, when used on 200-240 volt mains, that care must be exercised in the design of the voltage-doubler unit. Instead of, or as in the "universal" receivers, heating the heater direct from the mains with the aid of a dropping resistor, the use of a heater transformer delivering 25 volts at 0.3 amp. is recommended. By this, one can heat the tube up to its operating temperature before applying the high voltage, thus minimising the chances of internal breakdown.

The higher the capacity of the filter condensers before the choke, the higher the D.C. voltage output and the better the regulation. Two electrolytic condensers in parallel totaling 16 mfd formed the condenser bank for the experimental voltage-doubling unit tried out, giving 350-390 volts D.C. output according to the loads and line voltage.

Many uses could be made of such a unit besides the above. As a "C" bias supply for grid-blocking keying systems may be cited as an example.

# Operating and Experimental Section

Conducted by VK3WY.

## "What's in the Ether"

If a census were taken of the various branches of radio that individual hams were interested in, there is no doubt that DX would take a high place. It follows then that a section in Amateur Radio devoted to DX conditions would be of considerable value.

It is no doubt possible to get a considerable amount of DX by more or less haphazard working, but to obtain optimum results systematic planning and working is necessary. The bands have to be watched for DX that may show up for only an hour or so each day and after a few weeks disappear altogether. In short, it is really necessary to keep track of conditions on all the bands during the whole 24 hours. This may be all right for anyone who has the necessary time and endurance, but it becomes an impossibility for the majority of us who have to work now and then. In this case, as in many other cases, however, that which cannot be achieved by the individual may be achieved collectively. We cannot each follow conditions completely, but between us there should surely be no difficulty in doing so. If we each contribute our own observations it is only necessary for them to be correlated in a published "whole" to make available a complete story for all interested. This, then, is the object of this section.

It is necessary for the success of this new section that logs should be sent in from the different states giving details of DX worked or heard.

Logs should show the date, time and band on which DX was worked, and it is hoped that in future issues the best logs for the month may be recognised by some type of an honorary award, and it is our intention to publish the best log for each month. The necessary data is as follows: Date, time (E.S.T.), band, station worked and signal report. The period should be from the 12th of one month to the 12th of the next.

## 28 and 56 M.C. Section

Conducted by VK3JJ.

It is now many years since the first experiments in Australia on wavelengths between five and ten metres took place, and it is surprising that so little use has been made of the two bands in these regions allotted to us.

Are we doing justice to the 6000 K.C. of space available?

The small amount of activity on these frequencies has undoubtedly been caused by the lack of organisation and scarcity of news as to the doings of Amateurs in the neighbouring states. Under the new scheme put forward by the Magazine Committee, in which each division appoints one man to arrange tests and supply information, it should be possible, through the medium of "Amateur Radio," to keep more in touch with one another, and the foregoing difficulties should be greatly overcome.

In other parts of the world, a vast amount of work has been done on 56 M.C. in recent years, and with the aid of the super-regenerative receiver, it has been converted into an excellent phone band for local contacts, and is eminently well suited for 'plane and field communication. This band has received a little attention from Victorian hams at various times, but so far as is known results have been somewhat disappointing, and although signals have been very strong in the vicinity of the transmitter they rarely carry over more than five or six miles of suburban buildings. From all accounts, results have been better in other States, and we understand there is a regular 56 M.C. network in Sydney. However, there are several good locations on the hills within 30 or 40 miles from Melbourne, which offer wonderful opportunities for field work when a few portable sets have been constructed.

A small group of amateurs in all States starts up on 28 M.C. each year;

## Amateur Radio

usually from September or October, to take advantage of the summer conditions, and always finds it easy to work over distances varying from 500 to 2000 miles. Present indications seem to point to a repetition of previous years for Interstate work, but it is unlikely that any DX results will be obtained, owing to the eleven year cycle being at its lowest peak with regard to short wave communication.

In thinking of ten metres as a potential CW DX band, we must not lose sight of the fact that it is much more suitable for "cross town" phone communication than 56 M.C., providing super-regeneration is used in the receiver. In the rush to five metres on the other side of the world, this fact seems to have been overlooked, so here is an excellent chance for Australian hams to lead the way with ten Mx. phone.

As the ground wave on ten metres generally seems to travel up to about 25 miles, there is no reason why it could not be used for much of the local phone "rag chewing" at present carried out on 7 M.C., thus leaving 7 M.C. more clear of QRM and developing 28 M.C. at the same time.

The usual gear used for CW on the lower frequency bands can be quite easily altered for 28 M.C., and for phone the only additions necessary are a unit for quenching the detector and a deep system of modulation. The 7 M.C. "Zepp" antenna can be used with quite good results.

For 56 M.C., special gear will be needed, and for an excellent description the newcomer is referred to the article by VK2XY in a recent number.

To make these bands a success, it is necessary to have as much news as possible on unusual contacts, conditions; descriptions of gear, and, most important, technical articles.

A representative of this section should have been appointed by the Divisional Council by now, and all enthusiasts should immediately communicate with him for full information on this section.

### N.S.W. NOTES.

Representative, VK2YC.

From VK2YC, the suggestion is made to split 28 and 56 M.C. work into two sections, as there is a 56 M.C. group already formed, including 2PT, 2WD, 2NO, 2MW, 2DW, 2WE, 2SA, 2HU, 2XY and 2GS.

On 28 M.C., the most consistent

are 2XY, 2BX and 2YC; but no doubt 2HZ, 2HY, 2NO, 2BD, 2SA and 2ZW, all of whom were active last year, will be among the starters this year.

The first ten metre contact this season was between 2XY and 2YC during August, this being 2YC's 72nd QSO on the band. Please forward ten metre notes to VK2YC.

### VICTORIAN NOTES.

Representative, VK3JJ.

No signals have been heard on 56 M.C. for months now, and as far as I am aware no stations are at present operating there. It would be interesting to again hear VK3RS, whose phone transmissions on this band were the most successful in the tests carried out last year.

On 28 M.C., the outlook is more hopeful, and during August both 3NM and 3OF were heard. These two had no difficulty in making contact, the signals from 3NM being R6/7 here, with a good DC Crystal note. 3OF was using a pair of 245's in push pull with about 50 watts input, and was very strong, but the note was a little on the rough side.

Others that have decided to start up shortly include 3HK, 3BQ, 3DM, 3CP, 3YO, 3JO, 3CS, 3PX, 3XJ, 3BJ, 3DT, 3RJ, 3CW, 3WC and 3JJ. Most of them had plenty of experience on ten metres, and several will be using crystal control. 3NM and 3OF will be on the lookout each Sunday morning for locals, and the interstate signals which are expected to come through any day now.

### TEN METRE TESTS—ALL STATES.

Schedule, 9 a.m. to noon, Sundays.

It is hoped to arrange Interstate and New Zealand tests to be held during November and December.

Any suggestions, please?

### Harmonic

Advice has been received that VK5PK and VK5FB are to set sail per auto on September 29 on a long tour via Mildura, Wagga, Canberra and Sydney to Newcastle, and return via the South Coast road to Melbourne, arriving to celebrate the Centenary on October 20. Just take care, you hams along this route, these Croweaters are liable to drop in on you from a great height any moment. Best luck, OM's, and you will find yourselves very welcome where'er ye go.

# WESTINGHOUSE RADIO INSTRUMENTS

We are pleased to advise that we have been appointed Victorian Distributors for the world-famous Westinghouse Radio Instruments. Stocks should be available in about 10 weeks.

Meanwhile, if there is a special instrument over which you would like details, write us. We shall be happy to help you.

## WESTINGHOUSE METAL RECTIFIERS and WESTECTORS

Definite proof of the ever-growing popularity is obvious from the increased demand for the

**RECTIFIERS and WESTECTORS**

*A very interesting and instructive pamphlet about Westectors is available for the asking. Write for your copy to Victorian Factory Representatives:—*

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# New and Revised Q Signals

At the Madrid Conference, the Q signals were revised and all alterations are listed below. In addition, the abbreviations QRE, QRF, QSC, QSE, QSF, QSH, QSI, QSQ, QTK, QTL and QTN have been deleted, in most cases being incorporated in one of the revised abbreviations.

Abbreviation.	Question.	Answer or Advice.
QRD	Where are you bound and where are you from?	I am bound for.... from....
QRH	Does my frequency (wave-length) vary?	Your frequency (wave-length) varies.
QRI	Is my note good?	Your note varies.
QRV	Are you ready?	I am ready.
QSD	Is my keying correct; are my signals distinct?	Your keying is incorrect, your signals are bad.
QSG	Shall I send....telegrams (or one telegram) at a time?	Send .... telegrams (or one telegram) at a time.
QSK	Shall I continue with the transmission of all my traffic, I can hear you through my signals?	Continue with the transmission of all your traffic, I will interrupt you if necessary.
QSM	Shall I repeat the last telegram I sent you?	Repeat the last telegram you have sent me.
QSU	Shall I send (or reply) on.... kc/s (or m) and/or on waves of Type A1, A2, A3, or B?	Send (or reply) on....kc/s (or ...m) and/or on waves of Type A1, A2, A3 or B.
QSV	Shall I send a series of VVV....?	Send a series of VVV....
QSW	Will you send on .... kc/s (or .... m) and/or on waves of Type A1, A2, A3 or B?	I am going to send (or I will send) on....kc/s (or....m) and/or on waves of Type A1, A2, A3 or B.
QSX	Will you listen for .... (call sign) on .... kc/s (or .... m)?	I am listening for....(call sign) on....kc/s (or....m).
QSY	Shall I change to transmission on .... kc/s (or .... m) without changing the type of wave?	Change to transmission on.... kc/s (or....m) without changing the type of wave or
QTE	Shall I change to transmission on another wave?	Change to transmission on another wave.
QTG	What is my true bearing in relation to you? or What is my true bearing in relation to....(call sign) or What is the true bearing of ....(call sign) in relation to ....(call sign)?	Your true bearing in relation to me is...degrees. or Your true bearing in relation to ....(call sign) is....degrees at....(time). or The true bearing of .... (call sign) in relation to....(call sign) is...degrees at....(time).
QTO	Will you send your call sign for fifty seconds followed by a dash of ten seconds on.... kc/s (or m) in order that I may take your bearing?	I will send my call sign for fifty seconds followed by a dash of ten seconds on....kc/s (or....m) in order that you may take my bearing.
QTQ	Have you left dock (or port)?	I have just left dock (or port).
QTU	Can you communicate with my station by means of the International Code of Signals?	I am going to communicate with your station by means of the International Code of Signals.
	What are the hours during which your station is open?	My station is open from .... to....

# The Centenary International DX Contest

By VK3ML, Contest Manager.

The following is a rehash of all the dope we printed in the March, April and May issues concerning VK's own International Contest. The staging time for our first and gigantic contest is just around the corner, one month to be exact. Think of it, lads—October—DX—Prizes, real live tubes and meters all made possible through the support we have received from Messrs. Philips Lamps Ltd., A.W.A. Ltd. and Siemens Bros. Ltd. You have not forgotten them by any chance? Well here they are again. Open event: First Prize, One R.C.A. 852, second, a Siemens' meter or set of meters to the value of £10, and third, one R.C.A. 800 tube. Handicap Event: Only one prize, TC05/25, QC05/15, TC03/5 and an E424. They sound as sumptuous as ever, don't they?

My—the ether just reeks of DX—take in a large breath and sample it! Taste those Gs (they go well for breakfast, as one author once said), those F's, W's, YI's, etc.? They are our "meat" for October, so go to it and polish up that gear and start working DX just to get the "atmosphere" prior to the big event, and make sure that every overseas ham that you work knows all about the contest. If he doesn't, then he can't read QST, Radio, T & R, Break-In or the Amateur Radio—therefore he is no ham at all. All the dope on our contest has been circularised throughout the world and the support that we are to receive is as much as anyone could wish for. Listen to this:—

To VK3ML,

Manager Centenary Contest Committee.

On behalf of the Oakland Radio Club, I would like to take this opportunity of expressing our sincere congratulations and best wishes for your October DX Contest stop. We would like to go down on record in offering our complete co-operation in making

your first contest of this nature most successful in every respect, and one long to be remembered in the hearts of loyal amateurs in all parts of the universe; to the best of our ability.

(Signed) Horace R. Greer. W6TI.

That's healthy enough, isn't it? Well, that is a sample of what our overseas fraternity think of our show. We expect hundreds of entries from VK, and thousands from overseas. Present indications are that the majority of VK hams will be entering for the handicap event owing to power permits, etc. However, some have worked out "infallible" systems for winning the test, but are keeping them well to themselves. Have you planned your method of attacking the contest?

To non and unfinancial members of the W.I.A. and A.R.A., we must point out blankly that this contest is only for those who support these bodies and the amateur movement in Australia. If you wish to enter for the test it will be necessary for a subscription to be paid to your Division's Secretary before October the 1st. It's worth it, sons—for your sake and for all the other 1200 or so hams in VK. Do it now!

At the request of the awards' donators, a special rule is to be added to the existing ones. That is, "That the contest committee shall be permitted to take part in the contest and compete for the awards on the condition that a representative of these three firms be appointed supervising adjudicators." The committee has agreed to this ruling and the names of the officially appointed judges will be announced next issue.

We have issued repeated warnings about the power input business being in accordance with the licence of the station entering, and this, after last month's editorial, will be our final advice on the matter. W.I.A. inspectors are being appointed in each Division with full power to check

any station during the period of the contest. We certainly do not hope to have to disgrace any entrant by proving a false statement—no ham would care to do that; but if the W.I.A. doesn't do it then we cannot be held responsible for any serious actions that the P.M.G. might take, as outlined in the August magazine.

Coming back to the happy side of the contest—we have arranged special articles this month on transmitters and antennae efficiency, and a treatise on October conditions generally.

What more could one want? Co-operation, awards, hints on how to win, and when to hear the DX. It is all left to you lads yourselves now. Read the rules again in the March, April and May issues, and if you haven't got them send 6d. in stamps to the Editor for each copy required. Good luck to all.

(N.B.)—Logs and entries should be posted to the W.I.A. (Vic. Div.), Law Court Chambers, Queen Street, Melbourne, instead of Kelvin Hall, as given in the rules.

## Centenary Contest Trophies

With the rapid approach of the Centenary International DX Contest, we wish to again bring before your notice the fact that all trophies have been generously donated by our

advertisers. Our advertisers are doing their utmost to help us—are you all doing your share by supporting our advertisers?

### Philips Trophy

1st prize, handicap section.



MC1/50.



TC05/25.



E424N.



QC05/15.

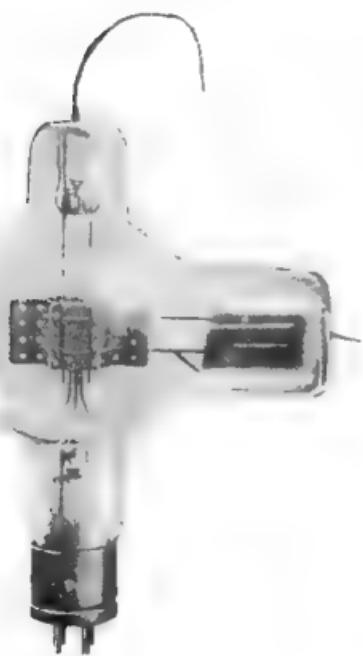


TC03/5.

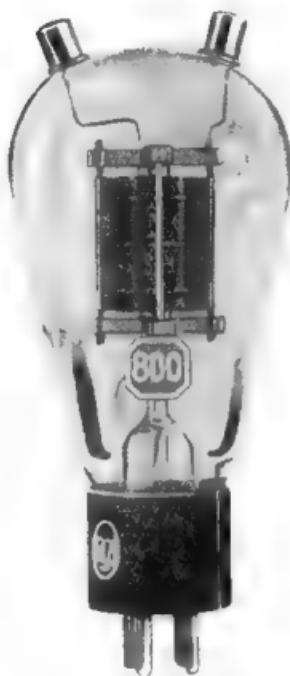
## A. W. Valve Company Trophies

1st prize open section.

2nd prize open section.



UX852



RCA800

## Siemens (Aust.) Pty. Limited

2nd prize open section.  
Meters to the value of £10.



# UK3 Section Notes

## Key Section

ZO—VK3BJ.

The section's monthly meeting was held in the Institute's f.b. new rooms in Law Court Chambers on August 7. The attendance was very good, and it is to be hoped will continue so. 3TY was welcomed as a new member. General business was dealt with, and, of course, QSL cards were distributed by 3RJ. All chaps interested are cordially invited to attend these meetings, which are held on the first Tuesday in each month. In the words of Mae West—"Come up and see us some time." Hi!

About 25 from the key, fone and short-wave sections spent a very interesting couple of hours on August 8, at the University's annual public demonstration inspecting the gadgets that were rigged up by the students. One exhibit, seen in the Biology School, which was the subject of many envious glances, would have been of great use to hams. This was a very cute little rock cutter and grinder, which would be ideal for accurately cutting and grinding quartz crystals with a minimum of effort. Hi!

Conditions on the dx bands have been very poor lately, and not many UK3's are on the air. A few weak Yanks, Japs, etc., struggle through the QRM on 40 at night, and an occasional European is heard in the mornings. 20 meters is apparently dead again. However, things should brighten up by the Centenary tests, which are now only a few weeks off.

Most of the gang seem to be either YL hunting, rebuilding or, like myself, improving their rigs for the forthcoming tests.

3ZR qso'd F8CG on 7 m.c. with only 5 watts input f.b. om. Sounds like a fairy tale to me.

3FJ has moved to VIS (now 2IM), and was heard from 2LZ recently.

5UR managed to visit a few of the local shacks when over here on holidays recently.

3XJ is making a good start. He is building a 2-stage xtal rig 2AB c.o. 46 f.d. and 210 p.a. preparatory to coming on the air for the first time.

3YO is trying to satisfy B.O.L.'s who throw stones at his roof when he goes on the air. Your keying has certainly improved o.b. Congrats.

3PQ is rebuilding for the contest, also 200 meter fone.

3ZJ experimenting on 80 meters, with self-excited oscillators, and in between times manages to find time to work 3KT on duplex fone on 40 and 80.

3NM now has an 800 in his final, and finds it very i.b. So do I, o.m.

5DT (ex-3HT) is now stationed at The Granites, a dreary hole.

3KO rebuilding again for contest—59, 46, p.p. 46", f.b. o.m., link coupling throughout.

3JT has the short-wave bug again, and will shortly be deserting 200 meters in favour of 20 and 40.

3LU doing a little experimenting on 75 centimeters. The only thing done so far is to enclose a tube.

3MR is rebuilding his rx, and also plans to rebuild his xmtx for the tests. The new rig will be 47 (40 meter c.o.), 47 f.d. (cut out for 40). QO 06/15 buffer and 862 p.a. Sure sounds f.b., boys. Hi! Competitors in the tests will have their work cut out trying to beat "Snow" I should think.

3VW, a new ham in Heidelberg, has been get-

ting R9 reports from his M.O.P.A. 46 osc. and 46 p.a., with 8 watts input.

3XQ has not much time for radio, as he has to get up at 6 every morning.

3GP recently had a three-way QSO, with AC8EMJ and PK4AI on 7 m.c.; f.b., om.

3DP, the most consistent station heard here, recently worked two South Americans on 7 m.c., with his 30 watt M.O.P.A. He would now like to swap an HC card for a G one. Some guys do have all the luck, hi!

3FJ has now installed link coupling between his 46 doubler and 10 p.a. Finds it much more efficient than capacity coupling, and the output is certainly much greater.

3VU just rebuilt his rx., now gr. det. and pentode, also his monitor. Is using 1 watt input to self-excited at present preparatory to rebuilding in favour of crystal.—73.

## UK3 Phone Notes

By J. R. KLING, VK3JB.

At the phone section meeting held on Tuesday, July 31, at the Institute's new quarters, at 111 Queen street, there was a large attendance as usual.

Officers for 1934-35:—Chairman, Mr. G. Thompson, 3TH; secretary, Mr. J. R. Kling, 3JB; assistant secretary, Mr. W. Sievers, 3UB. The allocations committee were re-elected unopposed.

A vote of thanks was extended to the allocations committee by the section for the way in which they had carried out their duties last year, and Mr. Jim Kerley responded on their behalf.

During the evening an unexpected visitor, in the person of our new State president, Mr. H. Kinnear, arrived to give the section the once-over, and was given a cordial reception from the boys. He suitably responded with all good wishes.

Mr. George Thompson was elected to represent us on the Institute Council.

The allocations committee had a busy time deciding on the finalists in the phone transmitters competition, and their decision was 3UY, 3DH, 3PA, 3BW, 3AM, 3LU.

The finals were to be run in the order given below:—

Sunday, August 5.—3LU, 10.30 p.m. till 11.30 p.m.; 3AM, 11.30 p.m. till 12.30 a.m.

Sunday, August 12.—3BW, 10.30 p.m. till 11.30 p.m.; 3PA, 11.30 p.m. till 12.30 p.m.

Sunday, August 19.—3DH, 10.30 p.m. till 11.30 p.m.; 3BY, 11.30 p.m. till 12.30 p.m.

The allocations for the next month were then read out by the chairman, and the crystals in the pool were then given out for the various positions on the "publicity band," as allocated to the applicants for frequencies.

Remarks were passed on the spacious rooms now occupied by the institute, and I believe it is everyone's opinion that we should make great strides from now on, and 3WI will soon be pumping out juice into the air from aerials erected on the roof of the new building.

## VICTORIAN QSL BUREAU.

By R. E. Jones (VK3RJ).

Cards are on hand at the above bureau for the undermentioned stations:—3AY, BO, BP, BR, BX, BZ, CA, CM, CW, EB, ES, ET, EW, FC, FM, GA, GC, GE, GU, GW, GX, IT, JE, JG, JK, JL, JN, JR, JW, JY, KM, KO, LE, LP, LZ,

MM, NN, NR, NT, NW, OP, OX, OF, OY, OZ, PK, PN, PZ, QJ, QZ, RN, RS, RW, TM, WC, WD, WK, WN, WQ, WX, XE, XO, YF, YR, YL, ZE, ZO, ZX, ZY, Messrs. Dinan, Hecker, Garraway, Webb, Bennett, Mawman. The above cards will be forwarded to the owners on receipt of a stamped envelope. The address of the bureau is 23 Landale street, Box Hill, Victoria.

ZD2C, of Lagos, Nigeria, writing to a VK listener, mentions that he has never heard VK or ZL, and has had only one report from our part of the world.

Hunter, G2ZQ, writing to the VK3 qsl manager, complains bitterly of the response by VK's of all districts to G qsls. He also states that my par in a previous issue has had little effect, and that many G stations who worked VH during 1931 are still awaiting cards from VK to make their WBR and WAO. Cards owed by VK stations to G2ZQ are as follows (one asterisk means that the card has been owing one year, two asterisks two years, etc.):-

VK2-FQ\*, HQ\*, LX\*, LZ\*, PN, PT\* XY\*, YR\*, ZW\*.

VK3-BX, GQ, HO, KA\*\*, LN\*, RW\*, TM\*, WX\*, YP\*, ZX\*.

VK4-JU.

VK5-DX, JO.

VK6-FO, GF\*.

VK7-JK\*.

The first genuine VK3 call sign commencing with the letter I has recently been issued to A. Argoon, 3 Jervis street, Burwood, Victoria. No other I calls have been issued to date, so all others are pirates.

Writer was persuaded to break an oft-repeated statement "that never again would he waste his time or money on 28 mc." Consequent upon the enthusiasm (?) shown at the August KP meeting it was to be expected that there would be a good muster on 28 mc. on Sunday, August 12 and 19. However, a solid fortnight spent on that band adduced one qso, that with VK3BQ, and this by arrangement. Not another solitary signal has been heard. The VR2 gang are supposed to be on this freq. regularly, and, according to VK2YC, VK2BX. 2XY and 2YO are on this frequency every Sunday from 8 a.m. to 1 p.m. and from 5 p.m. to 7 p.m. Here's hoping.

## Country Notes

### NORTH-EASTERN VK3.

By VK3EG.

Condix here have sure gone funny on 40 mx. Locals rise to R max., and fade away just as they are qso. Tans are the onl DX hr, and are strong enough, but ole man QRN has been having his say over there. In compensation 20 mx. has come to life, and stayed put. Excellent DX can be had with the required patience, and condix on hand, and all signs strong or weak seem to get them. At 3EG installed a half-wave vertical Zepp, with 15 ft. feeders, and first call landed W8CRA, who gave me R8, so looks like the vertical will stay put. The 20 mx. rig hr at present is T.P.T.G., with 210, and seems to perk O.K., but sounds like a power leak.

VR5KL is on the 14 m.c. with 15 watts on Hartley. Gets out well. R7/8 heavily modulated, and by the way he hollers at the mike he ought need no speech amp. Hi.

Ole John ZXQ paid a visit to Quirindi again, and was qso from ZHC. Had word with old Ray, too. ZHC put R7 fone into W3 and VE5 on 20 mx. F.B. one. ZHV was in VIS, visited ZHZ. Bill has been

in bed qrl with a QRO knee. ZYL has the xtal going agn. 2KN is rebuilding with 46's in the final. 2KR, they tell me, is on when B.C.L. 2MO is off on 227 mx. hi. A YL from Young told me that 2LB called her up on her birthday. F.B. om ani skeds? Hi! I always thought there was more than records to this 200 mx stuff. Wassy gang?

ZQJ is still rebuilding. Sa, om, you rival 2KN. But you ort to see the gear now; it's like a miniature WIXAF. 2XO has been on 40 mx now and then. Gens 80 mx must be crook now. 2VQ comes in hr wid a sig that must make QRZ gleeful. Glad you fade here sometimes, o.m. HL 2FY must YL a lot, as often hrds him after yanks from 1 a.m. on. 6GP is on 80, 40 and 20, and fone being good to copy.

2OH landing a bit of DX, but still has the very slightest chirp in that xp dc.

2EG went to VIS some weeks back, gathered 2OF and we went to see 2HB, 2ML and 2QJ.

They use the ham gear at 2HB for gunnery practice from George's Heights, and 2ML and 2B land soft jobs, as they're the only ones that can work the gear. Hi. 3EG, 4EL and W6GRL had f.b. 3-way QSO on 40 for couple hours.

Regular skeds have been worked once and twice weekly here with Chas., of W6GRL, over the last three months, and an interesting study of condix, dental and radio has taken place. You should watch for Chas. for a good rag chew.

Sorry I can't report much on VK3, as hear very few VK3 sigs. here at all. 4JU, 4EL, 4EL, 4RM, all roll in consistently on 7 m.c. The rest of them are on 3.5 mc. Hi!

Had a lunch hour qso wid ole ex-VK3OT, now 4OT, on 20 mx wid a nice xpdc sig. He was getting me QSA2 R1 there. Hi! Glad to c.u. on agn, ole timer, tho, and gesg the gang will be on your track agn soon.—73.

### MALLEE AND NORTHERN DISTRICT.

By VK3WE.

3500 KC band has been the most popular one during the winter months. Conditions on the higher frequencies have been very erratic, but 80 metres has been fairly consistent, and all VK stations have made full use of it, as well as W's, K's and ZL's on fone. Observations over a period of several months lead one to the view that 20 and 80 metres far surpass 40 as fone bands, but I am not saying that all 40 metre fone is punk. Anyone who has heard 3ZX, complete with crystal mike, will agree that it is possible to put out very f.b. 40 metre fone. 3WE, 3LH and 5LR are also talking of crystal mikes. 3KR has departed on his trip to the Islands, having arranged skeds to QSO 3OR from various places en route. 3CH was on MOPA, using town DC for a few days. 3LH on QRP from town supply, but very QRL. Little heard of 3PY and 3CE lately, but understand the latter is now richer by a junior op. 3EL heard occasionally; good quality fone. 3WN still pulling them in, and gone over to Heising modulation. 3OB still going strong. 3ZK has got the mitter at home, but sig not so good. 3CG and 3AN must be in the skip here. 3HG, 3KE, 3EG, 3JV, 3DW heard occasionally, while others to join the fone gang are 3OK, 3LB, 3GU.

5LR, 5MD, 5MD, 5BR, 5WJ, 5PK still very consistent. 2RJ and 2RS are strongest VK2's on the band, closely followed by the Wagga gang — 2UO, 2TH, 2YW and 2HU. Latter recently announced baptism of junior op. Others heard often were 2XZ, 2XO, 2KR, 2HZ, 2WH, 2DF, 2DR, 4UZ and 4KG. Conditions on the 200 metre fone band have not been very brilliant, QRN being bad during the first two weeks in August. The band is very active. VK2's, VK3's, VK4's,

VK5's can be heard here, and some lovely heterodynes occur when all get going on Sunday nights. By the way that some of the stations wobble, it is evident that the ruling that 200 metre stations must use C.C. is not being adhered to.

## WESTERN DISTRICT.

By 3HG and 3OW.

The most popular band at present is 80 metres, as the higher frequency bands are very dead, DX being rather hard to raise, and is not worth the amount of calling necessary to raise it. 80 has been really excellent, despite a few days of bad QRN. Quite a number of Yanks are coming through; several K6's and one K7 have also been heard. 3GQ and 2BP have managed to contact W stations, the former getting an R4 report on his tone. 3JE, now of Coleraine, has been on the air with low power, but is waiting on his gear from Melbourne before doing much. 3LB has installed tone, and gets out very well, although his voice is much weaker than music, due to his usual microphone being on loan. 3HG also on tone and getting out fairly well, considering the 10 watt input, best report being R8 from ZLACE. 3EK is still on 200 metre tone, but inactive on short waves. All the country boys are looking forward to the reserve week in VIM in October. It promises to be a bumper week this year. Please send along the dope on your doings each month.

## News from Federal Headquarters

By G. B. Ragless, Federal P.O.

### Queensland Wins Fisk Trophy.

The results of the 1934 QRP contest (the second leg of the Fisk trophy competition) are completed, and are presented here. It will be noticed that Queensland and Victoria had all their own way, the other States not competing to any degree. The lack of entries was most surprising, and much regretted by the Federal executive, as considerable time and trouble had been taken. It was found that not a single State had a team of five as required by the rules for the averaging of the scores, but as the majority of the States had three entrants it was decided to use this figure. The winning State was thus decided by averaging the three highest scores of each State. The four best scores—who all have "K" as a part of their calls—are:—VK4GK, 44,170; VK3KO, 31,110; VK4UK, 28,540; VK3YK, 22,641.

A number of stations favoured the 3.5 mc. band, where a large number of ZL stations were worked, but some of the leading stations used 7 and 14 mc, depending on the power used.

Of the Victorians Mr. K. Wellington, VK3KO, had 29 contacts with ZL on 3.5 mc., and Mr. G. Douglas, VK3YK, made 28. Mr. Norm. Cameron, VK3PG, worked U.S.A. four times on 14 mc., and used 3.5 mc. for a large number of ZL contacts.

### The Full Scores.

	Total Miles.	Power.	Contacts.	Points.	Score
VK4GK .. .	207,600	4.7	30	44,170	
VK4UK .. .	46,235	1.62	20	28,540	
VK4EI .. .	77,040	10	30	7,704	
Average for three leading stations, 26,805					(5 points to aggregate).
VK3KO .. .	44,150	1.95	30	31,110	
VK3YK .. .	44,800	1.44	30	22,641	
VK3PG .. .	71,560	3.96	30	18,070	
VK3RJ .. .	55,650	5	21	11,130	
Average for three leading stations, 23,340					(4 points to aggregate).

VK5KL .. .	22,950	5	24	4,590
VK5XU .. .	32,128	9.5	19	3,882
VK5LD .. .	5,650	1.73	5	3,260

Average for three leading stations, 3,744

(3 points to aggregate).

VK2KJ .. .	6,300	2.5	6	2,520
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Average, 840 (2 points to aggregate).

Adding the points to those secured in the first contest the aggregates are:—Victoria 9, Queensland 6, South Australia 6, New South Wales 6, Tasmania 2, Western Australia 0.

## COMMERCIAL QRM.

It has come under our notice that an Australian commercial station has been causing bad QRM on the 7 mc. band, and a complaint has been lodged with the P.M.G.'s Department. As it is contrary to the international regulations for a commercial to operate in the amateur bands this station has probably drifted in accidentally, due to lack of frequency control. If any member receives QRM from any commercial operating unlawfully in an amateur band Federal executive would be pleased to receive full particulars.

## W.A.C. CERTIFICATES.

At the last meeting the Federal executive examined QSL cards from the following stations, which were found in order, VK2BA and VK3JJ. Congratulations are extended, and they will receive their certificates from IARU headquarters in due course.

## The Association of Radio Amateurs N.S.W.

It is indeed gratifying to the VK2 hams to find that whereas "Amateur Radio" when first published was considered merely a "family" magazine, with its circulation limited principally to hams, an ever-increasing demand for the paper is becoming apparent from "outsiders." As radio enthusiasts, therefore, they should link up with one of our radio clubs or the A.R.A. (N.S.W.).

A quite mistaken impression appears to prevail amongst the ranks of these "quasi" amateurs that membership to radio clubs is limited to those holding the A.O.P.C., and just with the object of clarifying the position somewhat, we would like to state emphatically that the A.R.A. (N.S.W.), or any of its affiliated radio clubs, welcomes to their ranks any person at all who may be interested in short-wave radio. We have amongst us, in this State as in all others, an ever-growing number of comparatively recent "converts" to short-wave radio, and it is to these recent worshippers of short waves that this appeal to join up with the ham movement is directed. The secretary of the A.R.A. (N.S.W.) (Mr. Robert H. W. Power, of Wembly House, 841 George street, Sydney) will be only too pleased to furnish to any inquirer the fullest possible information regarding location, fees and particulars of any radio club.

In addition, at the risk of being charged with taking valuable space in which to reiterate the "remark superfluous," we want to increase the N.S.W. circulation of this journal. All N.S.W. supplies are handled by the A.R.A., and any subscription forwarded to the Secretary (as above) will ensure prompt and regular delivery by post each month. Subscriptions are 6d. per copy or 6/- per annum, post free.

F. M. GOYEN, Pres. A.R.A., N.S.W.  
R. H. W. POWER, Sec. A.R.A., N.S.W.

## NOTES FROM HEADQUARTERS.

The usual monthly meeting of the A.R.A. was held at the rooms of the Radio Telegraphist Association. There were about 40 members present

# Amateur Radio

It was decided to co-operate with the organisers of the Gentlemen's Hobbies Exhibition in aid of the Industrial Blind Institute. The exhibition is to be held in the Trust Buildings from September 12 to the September 22. The idea is to house a complete ham station. The final arrangements were left in the hands of a committee, consisting of 2UX, 2FQ and 2HZ. A cash prize was also donated by the A.R.A. for the best piece of apparatus.

Bex Cawthon (2VG) was elected as vice-president in place of V. Stanley, 2VS, who was forced to resign owing to pressure of business. Complaints were recorded regarding the operating of Townsville Radio VIT in the middle of the 40 metre band, using an input in the vicinity of 1 kilowatt.

Owing to extremely bad weather the field day to be held on July 23 was postponed, but is to be held on August 26.

A suggestion was mooted that the Federal executive be asked to consider a five-point relay contest as the contest for the next Fisk trophy, as it is of more general appeal to the majority of hams.

The meeting wound up with a debate between a team from Zero Beat Radio Club and an A.R.A. team, Gordon Kempston, 2UL and 2HZ being the Z.B.R.C. team, while 2BJ, 2ZR and 2WD represented the A.R.A. The subject—Electron Coupled Oscillators versus Crystal Control. Many interesting and novel points were brought forward, and the result was recorded by the adjudicator, 2UX, in favour of the crystal team.

## WESTERN SUBURBS WHISPERINGS. VK1MY.

ORM? Now, who got loose on the evening of Wednesday, 25/7/34, about 2145 SMT? Was sitting in the shack talking to a local ham, and sandwiching a thriller from 2GB in between rag chews, when a RS Blooper proceeded to churn its way gallily up and down 2GB's freq. wheeow whoo whoop . . . Test. Va . . . Several nights later at 9 p.m. the offender came to light again, and proceeded to burble forth the information that gunnery practice and torpedo practice would take place, etc. As these sigs were RS in BCL sets at Lakemba some miles away it seems pretty obvious that once again the poor ham will have to shoulder the blame of irate BCL's, while the commercials and the navy play about to their hearts' content.

2PH, whose sigs are generally RS in the west suburbs, has suddenly jumped to R9.

2RY is still very QRL building superhetas. You should have seen Ivan pounce on that error of VK3LH's in A.R. of June.

2EH has strayed from the fold. At present he is on the staff of B class 2MO, at Gunnedah. Believe that 2XJ is now the possessor of that famous Sniggle Snopper.

2FD—Congratulations, Frank, on having acquired a second op., but be sure and bring him up on CW first OB. I have heard an unkind rumour that his voice doesn't respond too good to the high freqs. on the new condenser mike!

2FO swears that there is a close season on DX out our way. See he can hear DX of all sorts, but unable to raise anything worth while, altho he appears to get more than his fair share of PK's.

2NP reports that his DX has increased 200 per cent, since putting a few feet on the far end of his antenna. Believe 2NJ also had the same experience, and yet 2ZH, our local DX king, says he has to have his antenna almost parallel to the ground to work DX. How come?

2QR is apparently still convalescing in VK4. Hope that you are fast recovering your old punch, Bob, and will be ready for the Centenary test.

Notice in the last issue of "A.R." that some VK5's are not getting all their QSL cards from

their VK6 contacts. I must be lucky; I've got two out of 17.

2OM.—Congrats. on getting your first-class commercial, Jack. With all that knowledge we probably will not know your phone next time. Getting notes of the doings of the gang over here is like getting pearls out of oysters. Would like some of the Ryde gang to give me some notes from around there. What about it, 2YZ?

2MY is fast going grey trying to make 2QA's version of a PP linear amplifier work. I actually got 60 M/a in the grid the other night, but when the PA was switched on it vanished back into the buffer.

2PG set he has by far the best power triode in VRE. After running for 5 mins. it will act as a radiator, and also fry the family sausages.

2MQ is very QRL with too much work. Hopes to complete his single sig super in time for the Centenary test. However, Mac, will probably use a couple of T250 in the PA, so he should land his fair share of DX.

## ZONE 2. ZO—VK2HV.

VK2RV (Ron Husband) is a new-comer to Zone 2, and receives f.b. reports on his QRP rig. Ron is contemplating QSO, and how. 2MV on 245.

Ray, of 2HC-2BE, is QRL with B.E.R.U. correspondence, so not much dope, however, still plenty of Yanks worked on 20 metres fone, with the old 4-stage crystal. The boys sure hope you are O.K. again, Ray. 2XQ, the old John, is QRL shearing in Quirindi at present; but not too QRL to punch brass, I'll bet. 2JW has been QRT for some time now, and looks like he is as far away from activity as ever. 2EN should be on again by now.

The old Clem, of 2UR, after three years QRT, will soon be back on QRP xtal. 2WT has just a few alterations to make ere tuning up on 7 m.c. with modulated R.F. Jack and Toddy, of 2CR, should be down on 40 soon to dodge QRM for the summer. Can't anything keep Cecil, of 2KR, off the air? He sure wins the belt for the most consistent ham in zone 2 this winter. Any AC in Gunny yet, Cec., OM? Has anyone heard Ivan, of 3EG? Say, Ivan, when is the Back to Quirindi week coming off?

2ZP is going full blast again. QO has taken the place of YL. The only thing wrong with 2ZP is his telephony? 2WV QRP with S.E. rig again. Teddy 2nd, of 2HV, hopes to be on soon, and would like to meet the 7 mc. fone gang per 2HV. We've still got hopes of hearing 2NA ere 1934 passes. Pretty feeble ones now, though, Andy, OM.

Say, chaps, could you please get the notes to 2HV by the 10th of each month. It's a hard job to get five months' dope from one letter.

## ZONE 3. ZO—VK2XO.

The Garden of Eden is still on the map. Most of the gang are active, the most consistent being 2SL, 2WS, 2CB, 2ZM, 2KR, 2XO, 2YK. 2SL has one of the best phone rigs on the air, using 55 Tritet and a box full of 48's, using xtal mike. 2YK, the 230 QRP merchant, is busy on sked with R.A.A.F.R., and holding his own with his QRO brothers. Roy has been on the air now for many years on CW only, and at last has decided to put in QRP phone. 2XO has been putting on slow Morse practice every Sunday night at 7.45 p.m. till 8 p.m. for a number of interested B.C.L.'s on the North Coast, and if all goes well there will be quite a number in the Garden of Eden sitting for the next A.O.P.C. 2XO is using a loud speaker for a mike, and reports are better than any other types of mikes tried. It is a D.O. job, with a 6V field, and has more gain than a P.M.G. mike.

# Amateur Radio

Conditions on the 80 metre band have not been of the best on account of bad skip at night, but during the day time conditions are wonderful. The Sydney and Melbourne stations come in well at mid-day, and 2NO and 2XO have been QSA 4 on phone in 2L at 12 noon. Can the 40 metre gang beat that? 2OV has been QRT on 80 for the last three months, also 2ZM, 2GI, 2NY, for what reason? 2XO and his second op. have started cutting xtal blanks out of a quartz the size of a kerosene box. 2WB, the Garden's QRO station, has been QRT on account of BCL QRM, and is changing his QRA, and will not be heard on phone for some time. 2CB, Bangalow, on QRP zone, and good to copy. 2ZM, Grafton, skates about the Clarence River every time he is on the air, about our bridge, our avenue, our river, our fish, etc. 2KR is still on QRP phone, and with Strawberry, his second op., is getting plenty QSO's. The Gunnedah gang, have been doing a lot of building and testing out in anticipation of the change-over of the power supply of the town from D.C. to A.C. 2XQ is now at 2HC, and will be 1st op. at 2HC for a few months. John will try out Ray's rig after the DX. It is pleasing to hear that Ray's health is well on the way, and Ray himself has had a few QSO's. 2FE has been experimenting with receivers, and has spent pounds trying out different circuits. The best so far is a two-valver, described by George Grammer QST, June, 1934. There is not the slightest sign of background noise, and one does not know it is in osc. till you twist the dial, then mind your ear.

## ZONE 4 (NEWCASTLE).

### 20—VK2OG.

On a recent Saturday afternoon the Newcastle Radio Club turned up in full force to inspect the local steelworks, and had a very fine time. The boys were particularly interested in QRO meters in the power house, in many cases reading up to 2000 amps, and 7000 volts, but decided it would be too much trouble shunting them for use in their rigs.

After detailed explanations in last month's notes of 2RB's QRO rig, which is in the process of being built, we have to report that in all probability Allan will shortly QSY to Sydney. All kinds of luck in your new QRA. OM.

Jim's 2ZC, poor ole 45's, are still holding their own in the endurance test with a wopping big input, and they run stone cold, too. The rig now boasts a pair of GUN's as rectifiers. 2MT is now experimenting with QRP A415 in Hartley. Charlie was QRO mad not so very long ago, but was recently married. Nuff sed. 2OF not very active these days. Mainly skeds on 30 mx. The 3-stage xtal rig still hangs together much to the surprise of the boys. 2FN is now active again from his new QRA. FB to hear you, Geoff. OM. 'Tis rumoured that 2FN and 2RG have come to an agreement on respective times for ether busting, and have signed the Magna Charta. Their aerials are almost touching. 2UF divides his time between 20 mx and 40 mx, while 2SO uses Moja on 30 mx.

Lionel, 2CS, rebuilding QRO this time. Stan, 2ZW, doing his best to rejuvenate a pair of very tired 211E's 14 volts in their filaments does the trick. Nothing like being optimistic, Stan, OM.

## ZONE 5.

### 20—Eric VK2?

The usual changeable conditions for this time of the year are very much in evidence in this locality. Early in July 20 metre QSO's, with the W's, were easier to raise than VK's, but after the second week in July conditions gradually became worse until at present it is practically impossible to raise anything, though a number of countries can still be heard. Looking at 40 mx, conditions here have been consistently

bad, and one is struck by the absence of some of the well-known R9 signs from over the Pacific. Even W6AM and W6CUH are only about R5/6. 30 metres show plenty of signs of activity, but even here one wonders at the volume of QRM for this time of the year. One wonders what it will be like next summer. Zone 5 may have its fourth ham in the ranks shortly in the shape of Allan Doolan, of Leurn. We hope you were successful in the A.O.P.C., Allan, OM. 2RJ still finds time of Sunday to let us hear some of his real fib fone, while Trevor, at 2NS, still seems to be too QRL or QYL to put that excellent T9 sig on the ether. Perhaps Trevor is conserving his energy for the big contest in October, and we already know his ability to win them. Plenty of luck, OM. Two OT's in 2ZW and 2PN both heard on the one night warming up on 30 mx, but the effort too great for them, and they are again conspicuous by their absence. Jack, up among the 2QA gold mines, has something up his sleeve in the way of a class "B" linear R.F. amp. for the QRP fone merchant. Jack will spill the beans soon. 2BP still grinds away, and growls about punk conditions, though he gets his share of QSO's.

Eric has been carrying out a couple of interesting tests with ZLICD, WIBKC and W7CMQ on the 30 mx. band. A shiny new rx has taken the place of the old 5-tube T.R.F. set at 2BP. The new rx. uses 58-58-58-56 tubes, and is fib. for break in.

## ZONE 6.

### Z0—VK2QA.

Owing to heavy rains and consequent QRM all over the State conditions on 80 have been a bit off colour. 2RJ, the old man at Mandurama, is back bigger and better than ever. The old genny reward, and reports the national FBKA performing very well. Hopes to have the A.C. connected shortly. 2WH still working remote control, mostly on with 2LM, who is using sup pressor grid modulation, and obtaining wonderful reports. Gets out better with 15 watts than he used to with 150 modulated telefunken system, is also using a small electron coupled receiver. Nothing heard of 2NM; guess he must be re-building "again"? 2QA burst out his genny again, and is at present trying to construct a rotary converter. Hopes to be on fone again shortly with a fair percentage of hum. The ew. rig at present in use is a 3-stage cc. job, using a pair of 45's P.P. in the P.A., with 50 volts on the plate.

## Zone 7.—By VK2FI.

Most of the zone 7 gang have been heard working on 30 mx during the past month, where conditions have been patchy. 2TM, a comparatively new ham, located at Montagle, near Young, puts out a nice signal from a QRP xtal job, using a 33 C.O. and 33 PA, working from "B" batta. His fone, using telefunken modulation, gets out quite well.

2GY, of Mount Stromlo, Canberra, is heard on RAAFWR skeds, and puts out a hefty signal.

The Wagga gang have been heard occasionally, 2UO predominating.

Rumour has it that Jack, of 2WA, is suffering from acute YL-itis, and radio taking a back seat. He was heard on 30 mx. fone recently, however, inquiring about a.s. supers. Allan, of 2TA, has been holidaying at Kosi, but since his return we believe he has been very ill. It is to be hoped you are on the mend by now, Allan.

Old 2RS, of Balranald, puts in an appearance every Sunday evening to join in the multi way international fone QSO presided over by 2RJ.

2RJ's fone is the loudest signal on the band here, the quality being excellent.

What's become of 2PN, 2OT, 2JQ, etc., these days? 2XF was heard using a portable rig.

Well, here's wishing you all the best of luck in the Centenary contest.

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## ZONE 8.

ZO—VK3QJ.

ZYI spent a couple of weeks in VIM, and was able to be present at a WIA meeting. He also inspected a good many shacks, and had an fb. time. His call sign evidently was not idle during his absence, as one VK3 told Harry that he only QSO'd him the previous day, but YI had been in VIM almost a week. Says there is only one thing wrong with VIM—their 300's are too expensive. 46's are cheap, tho, OM.

2QD and ZYI exchanged xmitters, and QD has been on 40 mx, occasionally with Tritet osc. and YI has Mopas. 3EG's trouble with BCL's was cured by getting further away. He is now in fb. location. Shack is a round concrete tank (water proof), and appears to act as an effective shield to BCL's. Sky wire is full wave 40 mx Zepp, with 92 ft. feeders.

2VF heard calling CQ on 40 mx few weeks back. R3 here, Reg. Called you several times, but ND.

Sorry to hear of your trouble, Bill (2HZ), and the Albury gang wish you a speedy recovery.

## UK4 (Queensland)

By VK4RY.

The monthly meeting of the Wireless Institute (Queensland Division) was held at headquarters, Heindorf House, Queen street, Brisbane, on Friday, August 3, before a good attendance of transmitting and student members.

After the general business a very interesting lecture on television was delivered by Mr. P. Kelly, and was enjoyed by all present.

The student classes are now in full swing, and any person desiring to join up should get in touch with the secretary, Box 1524V, G.P.O., Brisbane.

Conditions on the various bands have been poor in VIB for some time now, and the boys are anxiously awaiting the time for the return of dx signals.

4HL is at present using a TNT with an input of 25 watts to a 245; is also building a new three-tube AC receiver. Says it will be the berries when completed.

4WB is now on the air with a Hartley, and seems to be getting out fairly well, with an input of 15 watts to a 245.

4EL, of Townsville, intends rebuilding his rig shortly; must be getting ready for the Centenary dx contest.

4OB has been up on 80 mx, and been landing plenty of fone Qso's with ZL.

4RM is putting out a very hefty signal, and at times fairly rocks in VIB.

4RO has just completed his new three stage mopa, but has been striking a lot of trouble in getting a decent QRI, using 47, 46, 48.

4UK, of Toowoomba, recently paid a visit to VIB, and bought a lot of gear. Intends rebuilding xmitter and receiver. Vic. is looking forward to the big dx contest.

4WT, having just returned from holidays, has made himself a new bug, and he delights in throwing out stray dots. However, Bill states everything will be o.k., after a bit of practice and adjustments; we all hope so.

4NG is operating portable gear, and certainly does some fine work on 30 mx., where he can be heard working ZL in grand style.

4US and 4WD are putting in good work as Morse instructors at the W.I.A. rooms, where they can be seen teaching code to student members.

4JB will be off the air for some weeks, as he will be leaving in a few days for the West.

However, he is taking a receiver with him, and no doubt will have lots to tell us on his return.

4GU is building a new shack. Says the old one is too small. Dick landed two new countries recently—F8 and SU. How do you do it, o.m.?

4JM not heard here lately. Believe the old 45's have gone sick. Understand Jim will be on xtal shortly.

4FK will be leaving us shortly, having been transferred to VIM. The boys wish you all the best, Vern, o.m., and will be looking forward to hearing your sign from your new QRA.

4RV, of Cunnamulla, and 4NJ, of Tallebudgera, have been visiting VIB for the show festivities, and made calls on several local boys. Some good yarns were exchanged, and also some good advice was handed out by these old-timers.—23.

## UK5 (South Australia)

By Eric Halliday.

Things in VK5 up to 20/8/34 have been very quiet. Many of the rigs have not been switched on for weeks, because of the absence of DX.

Nearly all the active hams have become 200 meter conscious. Each Sunday sees more and more new stations working on this band. At the present time nearly 30 stations have been granted permission to operate on this band. This is equal to about 25 per cent. total number of amateurs licensed in VK5, and the interference problem is becoming more and more acute, as at present xtal control is not essential on the band.

5RP, 5BY, 5WS, 5MD, 5DR and 5KH are still putting out f.b. transmissions on 200 metres. 5SU recently made his debut, and others who expect to be on in a few weeks are 5MU, 5NR, 5JO and 5QR.

The August general meeting took the form of a picture show by Mr. J. Ferry. Nearly 70 members attended. Interesting views of Sydney, La Perouse receiving station, and Pennant Hills were shown.

The TDS continues to be the most active division of the Institute. An instrument has recently been constructed for checking the frequency of xtals.

50 m. fone still continues to interest 5FM. 5WP has been thinking about going over to xtal, and will be a starter in the Centenary contest. 5RX has been heard on with a tritet crystal rig. Hopes to excite a couple of high power tubes in p.p. with this oscillator.

5EM is a new call in VK5 belonging to Jack Mann, of Newman street, Semaphore. Jack's sister is second op., and the rig is a Hartley, using a 45, with 8 watts input on 40 m. 5BT has been heard on, with some good 40 m. fone. 5GA has been QRL building a new crystal rig. 5GW has been raking in plenty of DX on 10m. George recently built the 3-tube receiver described in "Amateur Radio." Says it is the goods for DX, the W's, etc., coming in like locals.

5HW has just started another series of elementary lectures for the Institute, and there are nearly 30 students attending them. The code class conducted each week by 5WP also has an attendance of 15 members. 5FQ, of Balaklava, has been getting out fairly well, recently working J, PK, KA and W. 5KQ and 5MZ have been again interested in 56 m.c. fone. 5RF hopes to build a new rig. It will be a rack and panel job, with probably 210's in p.p. in the last stage. 5XX has been heard on the air again.

(Continued on page 28.)

# R.A.A.F. Wireless Reserve Notes

## Notes and Activities.

### Federal Notes by the C.O.

With the training of members advancing so rapidly in the past few months it has been found necessary to further the standard of procedure in all districts. Thus, in a short space of time there will be issued part 2 of the Signal Training Manual. This volume is really very much advanced, and will take some time to thoroughly master. However, arrangements will be made with the district commanders to exercise the members very frequently in the new procedure. The standard of this new part will take us to as high as we could wish to go in our capacity as a reserve. When it has been thoroughly absorbed attention can be devoted to other interesting branches of training, and a move is being made to have the co-operation of the squadrons in practical training. News has been received that there is to be created shortly a squadron in West Australia, and we have hopes of better training conditions and more interest in that district.

A suggestion has been made that later on in the year the reserve should stage a gigantic field day for all members, the idea being that every member takes some portable gear, operated from batteries, out into the country, at least 10 miles from his permanent address, and works the whole week-end. Groups of stations could be organised, and we could undergo some real field or service training, which would be of valuable experience. However, this has just been thought of, and nothing further has been done to date, owing to various amateur engagements within the next few months. The next thing you will hear is that a request will come from your D/C for movement on a certain date together with full instructions regarding operating schedules, etc. There is no time like the present to forward suggestions and ideas that would help to make such a scheme a happy and enjoyable one for everyone.

Now that applications for membership will only be received every two months, starting from January, a major alteration has to be made in the training of recruits. Approval is being awaited for the examination of members in procedure for the appointment of official instructor in training. The idea is that as D/C's have so much to do at present, it is hard to expect them to devote so much time to training newcomers as well as run the district. Therefore, all qualified members should be capable instructors, and those that pass this simple written exam. will be given charge of a section of recruits for two months, and will be responsible for their education. If these recruits pass out satisfactorily in their examination after this period they will be transferred to a section proper, and the instructor will go back to his. It should be the aim of every recruit to show how much he has learned since joining by obtaining a pass in the test. In future no person can hold the appointment of section leader without being a qualified instructor. This is only fair and reasonable, because the S/L is there to train those in his section, and it is to nobody's benefit to be led by a poor operator. Full details of this proposal will be circularised to all members shortly, and the examination particulars enclosed. So, go to it, and fully master part 1 of the Signal Manual in order to be ready for the next volume. Part 2 will, of course, not be used in the above scheme for instructors' tests.

It is hoped that training flights will be conducted from Richmond and Laverton in September. Watch for details in the broadcasts.

### SECOND DISTRICT NOTES.

By 2Z1.

During the past few weeks VMB has undergone a complete reorganisation. Previously four sections were in operation, with perhaps two or three active members in each. These active men have been banded together into two complete sections, and at present constitute the only active sections in this district.

Some members have notified their temporary indisposition, and have been given a period of two months in which to arrange some means whereby they may commence training.

The decided increase of traffic totals for this period proves the right step has been taken in the reorganisation, though it is noticed that some members who were counted on to "do their bit" have not yet seriously settled down to the work in hand.

On 5/8/34 a "test" broadcast was transmitted in the form of two messages addressed to VMB. These messages contained in all fourteen errors in both procedure and spelling. All members were to have copied this, and submitted a statement pointing out the various errors. Owing to the sudden indisposition of the S/L for VMB1, the returns for that section have not yet been received, but will be published next month.

The returns from VMB2 were as follows:—

2B2 detected 12 errors.

2B3 detected 13 errors.

2B4 detected 6 errors.

2B5 detected 11 errors.

2B1 did not submit a report.

2B4 reported local interference which marred reception.

2B6 was absent on business.

Another of these tests will be conducted shortly. Arrangements are well in hand whereby VMB will combine with VMD in a relay test. It has been proposed to conduct this contest during the last week of September. Only certain members in VMB will be eligible for competition, and they are the ones constituting sections VMB1 and VMB2. In all, it is hoped to have at least 20 entrants.

At present the D/C's for VMB and VMD are compiling the rules for the contest, and these will be completed before this appears in print. Each member will be supplied with a copy.

Great credit is due to the S/L's, and members for their fine traffic handling this month, especially 2A1, who carried on though not in good health, and it is with regret that I have to announce that this fine chap has at last had to discontinue activity.

The new S/L's for VMB are now 2A2 and 2B5, and if they follow in the footsteps of the retiring S/L's 2A1 and 2B2 I am sure the high standard of these sections will be retained.

### Traffic.

VMB, total 1028, average 114-22.

VMB1, total 415, average 105-75.

VMB2, total 613, average 122-6.

Highest score—2B5, with 279.

### THIRD DISTRICT NOTES.

By 3Z1.

In the absence of 3Z1 I am writing these notes in the hopes that they will pass muster. Our intimitable D/C has left hurriedly on a short trip in hopes of recuperating after his short but severe illness, and we hope that long be-

fore next issue he will be back with us again. 3C2 sailed recently for Fiji on the Strathnaver, and was wished bon voyage in person by 3D4, 3Z2 and quite a group of friends. He hopes to visit a good many stations in Sydney and Brisbane as he passes through, both going and coming. The only schedules he has made are to work with 3D4 from VK2HU.

The country members are very pleased with the idea of the proposed section flights every month, but as they have been so often disappointed in the past they will believe them when they see them. They are all keen on the camp at Point Cook, but in many cases report that it will be impossible for them to spare the time unless it could be made to coincide with the convention.

The Sunday morning schedules have been well attended in most cases, but one cannot help noticing the difference on the days following Test matches. On those occasions there are fewer stations active, and the ones that are on duty lack some of their usual sparkle.

The traffic totals are not as yet all to hand, but the few that are in are given below:- 3B3 23, 3B2 6, 3D6 50. This latter total would have been much higher had it not been for the trouble that is being caused to a prehistoric B.C.L. set a few doors away.

(Continued from page 26.)

## VK6 (West Australia)

By VK6CP.

In August magazine the office-bearers were inadvertently wrongly reported, and the correction is as under:- Hon. president, Dr. Nimmo; president, A. E. Stevens (6BN); vice-presidents, P. Kiernick (6PK) and W. Coxon (6AG); secretary, C. Quinn (6CX); assistant secretary, V. Bell (6KR); treasurer, J. Parks (6BB); publicity officer and QSL, J. Mead (6LJ); journal editor, G. Cooke (6CP).

The council have met and discussed various plans for the future, chief of which being the rejuvenating of SWI station and 10 mx. and 5mx. work.

Relating to the exploitation of 10 and 5 mx bands, all members are requested to attend the general and shack meetings to put this matter on a solid basis.

The A.O.P.C. classes are in full swing, with 6CP assisting by slow Morse on Wednesday nights from his station on 80 mx.

Quite a few of the gang have been on the sick list, but should all now be O.K. for big things.

Looking at "Amateur Radio" doings during the past two years it is noticeable that there has been no outstanding development. Certainly hams have found out how to use the new type of tubes to the best advantage, but this has all been done on the old style, which most of us knew years ago.

Getting fone out on 80 and 40 mx has whiskers on it, and it is up to us as a body of hams to exploit the possibilities of our higher frequencies, to try and devise new and original hook-ups, etc. With these ideas in view, boys, let us show the world that ham radio lives and VK6 leads.

Most VK6 local work is being done on 30 mx on fone, and those responsible are 6RA, KO, KB, HD, MN, CP; CW stations are 6CY, FH, KZ.

6RA has now f.b. fone, with a good sharp carrier that makes it a bit difficult for any-

thing but a good RX to hold. He also has a top-notch electron couple RX.

6KO fone very weak and patchy.

6KB has never reached standard in his new QRA.

6HD came up quite decent recently, although still using Helsing on push-pull oscillator.

6MN quite decent.

6CP the same old thing, just plain fone.

All the above can be heard on Sunday evening in a circular QSO.

6FH, an old ham with a new beginning, is pounding out good CW, and 6FM can sometimes be heard on 40 mx.

6CX, HW, CY, KZ all doing a bit on the key.

6FL is very ill, and we all wish him a speedy recovery.

Country hams are very inactive just now, while nearer home the news comes as a bombshell that 6KR is selling all his gear, and going into recess indefinitely. Vic. was a real live wire on the air, and, together with CX, has just gained his limited broadcast. Congrats!

Well, cheerio, boys, and when are you going to give me those technical articles and station dope.

Please note.—The address of our secretary is 162 Subiaco road, Subiaco, W.A.

## VK7 (Tasmania)

By VK7PA.

The monthly meeting of this division went off quietly on Tuesday night, August 7, with only a fair attendance. The membership list benefited again this month, and the 200 meter gang continue their call for members; the steady increase of late has been due mainly to these announcements.

Since last month, I might mention, ham membership is now 100 per cent., the only previous non-member having joined up.

The meeting decided that a small token, suitably inscribed, be forwarded to our old associate ex-VK7GE.

Another point of interest was the decision to open the club rooms every Tuesday night to encourage members together, and it is hoped that advantage will be taken of this move, and make the effort worth while, so roll up, lads, and discuss your problems together on Tuesday nights at the rooms. A short talk or two will be arranged if sufficient interest is shown, and there is always a good yarn or two to be told, hij. The meeting concluded with a talk on the S.W. superhet receiver, conducted by 7RB, which was much appreciated by all.

Activities, at the moment, seem to be centring around the Centenary contest, and the preparation for this is foremost in the minds of all active hams here.

VK7 is to have two trophies for this contest—one for the receiving class—non hams, and one for the ham who secures most points during the contest.

7JB is preparing for a vertical antenna, to which end he is installing a 90 ft. stick.

7RB is to act in the capacity of official op. for TWI during the contest, provided a suitable xmtr. can be constructed and ready in time.

7LJ has been improving his skywire; has a half-wave 80-meter doublet up now.

7OW has been using a crystal mike of late, I don't know whether that will account for the studio noise you hear from there—the clock with a wheeze and the anvil effects when turning records. Keep your switch up, Crosby.—73.

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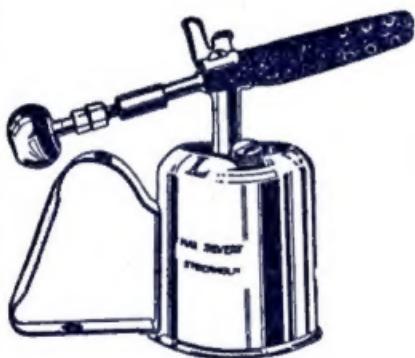
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